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SURVEY OF EDUCATIONAL MEDIA RESEARCH AND PROGRAMS IN LATIN AMERICA.
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A SURVEY OF EDUCATIONAL MEDIA RESEARCH IN 19 LATIN AMERICAN COUNTRIES WAS CONDUCTED AND ASSESSED. ITS PURPOSE WAS TO IDENTIFY, REPORT, AND DISSEMINATE INFORMATION ON THOSE AGENCIES AND PERSONNEL ENGAGED IN SUCH RESEARCH. A PRELIMINARY ANALYSIS DETERMINED WHICH AGENCIES WERE CONDUCTING OR HAD ACCESS TO EDUCATIONAL MEDIA RESEARCH. A QUESTIONNAIRE WAS SENT TO DETERMINE FURTHER INFORMATION ON THE EXTENT OF EACH COUNTRY'S EDUCATIONAL MEDIA. THE FINAL SAMPLE CONSISTED OF 64 PERSONS REPRESENTING 28 DIFFERENT AGENCIES IN 7 COUNTRIES WHERE RESEARCH PROGRAMS WERE IDENTIFIED. DATA FROM LETTERS, QUESTIONNAIRES, INTERVIEWS, AND THE RESEARCH STUDIES THEMSELVES WERE COMPILED. DESCRIPTIONS OF MEDIA RESEARCH IN 19 COUNTRIES AT THE TIME OF THE REPORT PUBLICATION ARE INCLUDED. (HB)

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by

Donald P. Ely

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AND PROGRAMS IN LATIN AMERICA

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Donald P. Ely[1]

The survey and study reported herein were performed
pursuant to a contract with the United States
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Education, and Welfare
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[1] The author of this report, and investigator for the study, is director of the Center for Instructional Communications, the Newhouse Communications Center, Syracuse University. In 1963 he was Senior Fulbright Lecturer at the Instituto Pedagógico of the University of Chile.

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INTRODUCTION

This study is the second in a series contracted by the Educational Media Branch of the U. S. Office of Education in an attempt to make a global assessment of educational media research and to make the published findings available in the United States. The first study to be completed, Survey of Educational Media Research in the Far East[1], was conducted by the Audiovisual Center of the International Christian University at Tokyo. This second study extends the survey to 18 Latin American countries.[2] Its purpose is to report information on educational media research and to identify agencies and personnel engaged in such research. To provide a framework for the present research picture in Latin America, and to give some indication of what may be expected in the future, it follows the pattern of the previous study to analyze progress in the practical utilization of educational media in each country.

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[1] Survey of Educational Media Research in the Far East, U. S. Department of Health, Education and Welfare, Office of Education, 1963. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 181 pages, 70 cents (OE-34025). (Pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare, N.D.E.A.--SAE-9347.)

[2] Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Haiti, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

In the Far East study "educational media research" is interpreted to include "experimental programing, testing, evaluation, and use of all the newer media of communication including broadcast and closed-circuit television, radio, motion pictures, audio recordings, slides, filmstrips, and other projected materials." In the Latin American study it is important to note that experimentation is added to the research designation. Programs of experimentation imply evaluation of results, even though the analysis may not be a systematically designed study using conventional evaluative instruments and research procedures.

This study accepts the above interpretation of what the media spectrum encompasses. However, the investigation for this study was not too far along before it became obvious that if the term educational media were restricted to mean only those media used in formal education programs, the report of Latin American research would be neglible. It therefore seemed to be in order to expand the interpretation of educational media research to include research from both formal and informal programs as well as from the related fields of agriculture, health, and literacy. This expanded interpretation would appear to be valid since cognate fields concerned with the communication of ideas offer much that is useful to those who operate in the mainstream of the educational enterprise. Studies involving communication without words, for instance, or studies of the effectiveness of combinations of media, are valuable whether or not they occur in the formal educational setting.

Other limitations imposed on this survey were not so easily resolved. Comprehensive contacts, essential to any exhaustive survey, are difficult to establish and maintain in 18 countries covering an area larger than the continental United States and having diverse languages, customs, and resources. The educational systems differ in organization, the problems are vast, and generally, utilization of educational media is a low priority item. During one calendar year, the time alloted to this study, changes are bound to occur; new programs begin and others go out of existence. In view of these limitations some omissions are inevitable. Moreover, the investigator is not a Latin American expert. This study is the work of a single individual who has lived in Latin America, who has an affinity for that part of the world, and who appreciates the educational problems found there.

Procedures

The investigator made a preliminary analysis to determine which agencies are conducting or have access to educational media research in Latin America. Those identified include agencies that are international in scope, and direct local contacts. In the first group are the Agency for International Development, Communication Resources Division, Washington, D. C.; the Inter-American Popular Information Program (Programa Interamericano de Información Popular), San José, Costa Rica; the Pan American Union, Washington, D. C.; the UNESCO-supported Latin-American Film Institute (Instituto Latinamericano de Cinematografía Educativa) in Mexico City; and the UNESCO-supported Latin-American Center for the Training of Educational Specialists (Centro Latinamericano para Formación de Especialistas en Educación), Santiago, Chile.

Direct local contacts included the media officers in each ministry of education; professors of audiovisual communications in universities and normal schools; the U. S. AID communication media officers in each country; cultural affairs officers of the U. S. embassies; and representatives of U. S. universities with educational responsibilities in the various Latin-American countries.

Interviews with key personnel in Washington, D. C., and correspondence with potential sources of information elsewhere produced a list of 109 names. Seventy-six persons on this list responded to the introductory letter (or to the follow-up letter that went out after two months). Correspondence was carried on in English, French, Portuguese, or Spanish, depending on the native language of the person addressed.

The introductory letter was followed by a questionnaire designed to determine (1) the validity of the contact; (2) the extent of educational media represented by the contact; (3) other possible sources of information within the country; and (4) whether a personal visitation was warranted.

Each contact was disposed of as follows:

1. If the contact neither reported research nor supplied new sources of information he was eliminated from the survey.
2. If he supplied new sources of information, follow-up correspondence and a questionnaire were addressed to each new source.
3. If research was reported, a copy or abstract of the study was requested.
4. Where active research programs materialized, the investigator scheduled interviews with the appropriate personnel.

During June 1964, the investigator interviewed 64 persons representing 28 different agencies in seven countries. Data from letters, questionnaires, interviews, and the studies themselves were compiled. The report that follows is a synthesis of this data.

EDUCATIONAL MEDIA IN LATIN AMERICA
(A Brief Summary of the Current Situation)

If we were to superficially analyze the educational problems of Latin America, the emerging picture would not be substantially different from that in any other part of the world. School-age population is on the increase; qualified teachers are underpaid and their numbers fall far short of the demand. The instructional patterns of another age are congealed in tradition, and the instructional resources are grossly inadequate for teaching and learning in a modern world.

To characterize Latin-American education as a whole is, of course, difficult, but this generalization by Sam Shapiro sums up the nature of the enterprise today:

"Only half of the children between five and eighteen are attending school; in rural areas the figure is one in four. The illiteracy rate ranges from 13 percent in Argentina to 70 percent in Guatemala and 89 percent in Haiti (versus two percent in the United States). Only one child in twenty completes a grade-school education."[1]

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[1] Invisible Latin America. Boston: Beacon Press, 1963, page 3.

Two recent publications, also published in this country, give a good review of education in Latin America and can profitably be consulted for specific data concerning the present climate and trends in education. One is the entire January 1964 issue of *Phi Delta Kappan*, "Problems and Promises of Education in Latin America." The other is *The Current Situation in Latin-American Education* by Charles Hauch. (Government Printing Office, Washington, D. C. OE-14080)

There is no doubt that educational media exist in varying degrees of sophistication in nearly all the schools of Latin America. From crude charts on wrapping paper to closed-circuit television, from uneven chalkboard surfaces to multi-media programs that include 8mm single-concept films and programmed instruction, the media *are* there. In a detailed survey, the inexpensive, homemade materials would of course dominate the scene.

Some teachers in urban areas may actively seek modern instructional resources by arranging for motion pictures and equipment from the local organizations that make them available. Many more will experiment with inexpensive materials such as cardboard and flannel to create their own teaching aids. An amazing array of such aids are in fact constructed from boxes, cans, string, cloth, paper, and even ping-pong balls.

The paradox of the teaching materials picture is the lack of adequate texts, notebooks, and paper in the schoolroom, while only a few kilometers away, extensive film libraries exist and television experiments are going on. Whereas education in Latin America is continually caught up in the day-to-day requirements of basic instructional materials, educators somehow do not lose sight of the technological world that surrounds them. Classroom supplies may be short in store, but the attempt persists to find the potential solutions that technology has to offer. The hope is that someday the benefits of the new educational media will permit rapid advances over the present state.

Ministries of Education

As teachers attempt in varying degrees to make their own teaching materials, ministries of education have begun to set up departments using the audiovisual label, or some variation thereof. These departments are for the most part production and distribution agencies with some additional responsibility for demonstrations and training. Teaching aids most commonly produced are filmstrips, slide sets, and radio programs and less frequently, television programs. Ministries almost never undertake programs of motion picture production. On the other hand, motion pictures dominate their distribution activities, with filmstrips and slides following.

Demonstration programs are generally of the motivational type that exhort the value of the visual image in teaching and offer examples of materials available through the ministry's audiovisual department. From time to time the departments offer training in equipment operation and short workshops in teachers colleges within their countries.

Universities and Normal Schools

Courses in audiovisual media are virtually non-existent except in Brazil where a new requirement specifies one course for every person preparing to teach. Professors of educational media or audiovisual communications are scarce and the few that are so titled carry other major responsibilities of which the educational media are only a part.

The only formal program in Latin America that trains educational media specialists is offered by the National Polytechnic Institute in Mexico City. This is an intensive, six-month course which has been offered every year since 1960. Students are required to have completed professional studies before entrance, and upon acceptance attend classes five days a week to complete courses in nine content areas.

Some professors are using educational media, but not as a direct result of organized programs within their universities. One finds an occasional science professor using closed-circuit television to magnify images, or a language professor who has acquired an electronic laboratory. These are rare cases, but they do exist.

Secondary and Elementary Schools

There are vast distinctions in the utilization of media in elementary and secondary schools, and by urban and rural schools. The highest use of media, in the technological sense, is most likely to be found in an urban secondary school; least likely in a rural elementary school.

Urban secondary schools frequently have several types of audiovisual equipment, often located in the principal's office. Teachers at the secondary level can be found using slides, an opaque projector, or a tape recorder. Very few motion pictures are used in Latin-American schools and those few are usually shown to large groups in big meeting rooms with borrowed equipment.

Some teachers, those who have attended short courses given by the ministry of education, a university, or a visiting UNESCO expert, will actively seek out materials and equipment, perhaps request that the school buy equipment, or sometimes even purchase their own. In Mexico, for instance, the Latin-American Educational Film Institute in 1963 sold more than 10,000 filmstrip-slide projectors to schools and more than 62,000 filmstrips directly to teachers. But activities of this type are confined almost entirely to the secondary level. Very seldom is audiovisual equipment used in an elementary school. Elementary teachers depend almost entirely on homemade materials, if indeed they use anything at all.

Informal Education

Informal educational programs--programs for adults in literacy, agriculture, and health--are more intent upon the application of educational media than are the schools or universities. Even here, however, utilization is still in the developing stage. Literacy programs in several countries utilize television and radio in conjunction with group instruction and home study, and most literacy programs use films, pictures, and charts that are related to their printed materials. Agricultural training programs, patterned after the successful U. S. Extension programs, use mass media and other educational materials to communicate their message. Dissemination programs in health and sanitation follow much the same course.

Research Activity

Pablo Roca writing in the special Latin-American issue of Phi Delta Kappan presents an excellent analysis of educational research in that region. "If we consider," he states in conclusion, "that a research project should fulfill the standards of rigorous scholarship and of the scientific method, that it should furnish the answer to some important practical problems in education or some significant theoretical question, that it should open an original avenue of inquiry or lead to a new approach in an established area of research, or that it should refine and improve the techniques and tools of education or provide a deeper understanding of the concepts and processes of education, then we could say that very few educational research projects have been completed."[1]

The findings of the survey reported here corroborate Mr. Roca's statement. One finds, to be sure, some educational media research, but it is spotty and uneven in quality. For every one study that the Manuel de Salas Experimental School[1] completes using a valid research design, careful controls, and a useful statistical analysis, there are several surveys that attempt no more than to count the number of radio and television sets available to schools. This latter type, while needed to assess the general availability of equipment, cannot justifiably be called research.

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[1] "Educational Research in Latin America," Phi Delta Kappan, January 1964, Vol. 45, No. 4, page 218.

Some of the best media research being done in Latin America is not in the mainstream of education. The research output of such agencies as the Inter-American Popular Information Program in Costa Rica and Uruguay and the Inter-American Institute of Agricultural Sciences of the Organization of American States in Costa Rica, Peru, and Uruguay exceeds that of all educational agencies put together. The Spector and Brodbeck studies reported in the research section on pages 79 and 72 are valid research studies sponsored by the U. S. Office of Education, but these too are outside the realm of formal education.

Experimental Activity

A few schools and colleges are beginning to experiment with educational media for instructional purposes. In nearly every case, however, no systematic research plan is built into the experiment. One of the most promising experiments has been the development of a partial course in modern physics sponsored by UNESCO at the Brazilian Institute of Education, Science, and Culture at Sao Paulo. Organized to explore new instructional methods and techniques, primarily in the basic sciences, the project utilized programmed instruction, simple inexpensive laboratory materials, 8mm single-concept films, 16mm sound films, and television.

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[1] University of Chile.

At the University of Buenos Aires, the Faculty of Science is demonstrating the use of kinescopes for the teaching of certain portions of college physics courses, and in Caracas, Venezuela, kindergarten teachers have used television to demonstrate new ideas to pupils.

School radio is an established practice in some countries while in others, such as the Province of Buenos Aires in Argentina, it is still considered as experimental.

Financial Support

Most of the financial support for Latin-American research and experimentation in educational media comes from the outside. UNESCO, for example, supports the Latin-American Educational Film Institute in Mexico City, the physics program in Sao Paulo, and the Inter-American

Center for Advanced Studies in Journalism at Quito, Ecuador. The Ford Foundation supports television projects at the University of Buenos Aires and at the Technological Institute at Monterrey, Mexico. The major financial support of the Inter-American Popular Information Program comes from the Rockefeller Foundation. The U. S. Agency for International Development contributes to the development of the field through its communications media advisors, contract programs, and support for research projects.

There are, of course, exceptions to outside financial support, such as the government-supported demonstrations in Venezuela and the TV research in Chile.

EDUCATIONAL MEDIA PROGRAMS IN LATIN AMERICA
(A Country-by-Country Analysis)

Media programs are well-established in many Latin-American countries. That the directors, staffs, and sponsors of these programs value the importance of research was clearly indicated through personal interviews. Priorities in each country, however, seem to dictate the building up of sound operational programs before taking the next step to research. Some of the on-going programs reported here are experimental in nature, but have no research findings to report. They therefore appear in this section rather than among the research abstracts.

The analyses of countries visited are naturally more comprehensive than those with whom correspondence was the only contact. In some cases the names and addresses of the educators involved in educational media programs were the only specific information that could be elicited.

In this light, the following country-by-country analysis is offered.

ARGENTINA

Department of Audiovisual Communications
University of Buenos Aires
Buenos Aires
Prof. José Bullaude

Professor Bullaude, who is the author of *El Nuevo Mundo de la Imagen*, the only recent audiovisual publication written originally in the Spanish language, has just concluded a four-month study at the University of Buenos Aires in the fields of sociology, geography, and business. Certain classes were regrouped and all of the University's audiovisual media were brought to bear on the instructional situation in an attempt to enliven teaching, speed up the learning of difficult concepts, and find solutions to major instructional problems. An earnest attempt was made to use existing materials, equipment, and personnel of the Technologia de Instrucción y Communicación Audiovisuales (an audiovisual service center) rather than to add additional materials, equipment and personnel. Experimental and control groups were formed for each course involved in the experiment within the three disciplines. While the study itself had been completed, the analysis of the research data was not finished in time to be included in this report.

Professor Bullaude is particularly interested in the "message" element of the communication process and hopes to continue his research along those lines. His plan is to study an identical message communicated through different media and, through this study, to characterize each medium in terms of its apparent strengths and weaknesses.

Department of Audiovisual Education
Ministry of Education and Justice
Lavalle 2634
Buenos Aires
Prof. Vincente R. DiPasquale, Chief

The Department of Audiovisual Education is an integral part of the Ministry of Education and Justice. Its chief, Professor DePasquale, reports directly to the Undersecretary of Education. The specified objective of the department is five-fold; (1) to investigate techniques, methods, and teaching procedures; (2) to produce and distribute materials; (3) to establish standards; (4) to select and train educational and technical specialists; and (5) to coordinate the activities of other regional and national organizations concerned with the application of audiovisual media to instruction. The Department's over-all purpose is to build up a strong audiovisual movement within the national educational structure. It serves all areas of education with the exception of those at the university level.

To accomplish its objectives, the Department operates through two sub-sections: the Division of Instruction and the Division of Production. Thirty teachers, selected from various subject-matter fields and given an intensive basic audiovisual course, serve as specialists in the planning and production of teaching materials.

An evaluation section utilizes the services of five educational psychologists who have also undergone intensive audiovisual training. Their primary function is to study all available audiovisual materials to determine their relation to teaching situations on all levels below the university. Materials produced by the Department are under close scrutiny during their initial use in the schools.

Up until 1952, the Department, then known as the Department of Educational Radio and Film, had been occupied largely with 16mm films, filmstrips, dramatic arts, and educational radio. More recently it has begun to expand its efforts to promote the use of televised instruction in the schools. Television is being developed as a coordinate function of the Department of Audiovisual Education.

The Department began its TV work in November 1952, soon after television was installed in Argentina. With this innovation, it was reorganized into four sub-departments--Radio, Theater, Motion Pictures and Television--each with its own section of instruction directed by a technical expert.

The open-circuit television programs initiated in 1952 were directed toward the community in general. They provided entertainment and cultural enrichment at a secondary-school level or on a level acceptable to both primary and secondary schools. A group of three specialists using the facilities of the Department's art studio and its own motion picture and photo laboratories, worked to produce cartoons, maps, animated drawings, and dramatization for television usage.

This experimental project was continued until November 1958. At that time the Department, which had produced educational radio programs since 1949 and both motion picture and filmstrip materials since 1948, undertook a general analysis of its functions with a view to technological reorientation and restructuring. The analysis of methods utilized and materials produced (including TV) provided the Department staff with empirical criteria that enabled them to develop a systematic plan for reorganization.

The Department staff immediately saw the necessity of establishing norms and setting up standards before they could build up the production of programs. The first step was to send a staff member abroad to make a study and to propose a plan to restructure the services of the Department. His recommendation resulted in the present Divisions of Instruction and Production. To complete the new structure the Department trained the 30 teachers who now serve as materials specialists. The next step was to initiate a pilot study to establish norms. This study, designed to look at programming, utilization, and evaluation, was carried out with cooperation from two normal schools, the Psychotechnical Office of the Navy Department, the National Radio, and TV Channel 7. When at this time the Department organized its Office of Evaluation, the five educational psychologists were added to the staff.

The Department's program staffs formed thematic groups who worked together to integrate subject matter for filmstrips, radio, and TV programs and to correlate the three media. They worked closely with the teachers and students of the two normal schools. The most interesting aspect of this reorganization was that a plan for television began to be established within an AV doctrine.

The conclusions of the investigation will be published shortly. In the meantime, information collected by the Office of Evaluation has permitted some standardized procedures to be established. These procedures can be used to systematize the future work of the Department in its study of AV materials in general and of television in particular.

In order to carry out the plan at a deliberate pace, the open-circuit television programs were suspended in 1962. A program of televised instruction is being carried on in the interim by the National Council of Technical Education. Two television courses are being offered--one in electronics, the other in fashion design. Commercial stations also offer educational programs, and in the province of Mendoza a group of educators who maintain a tie with the Department are producing their own television programs for that area.

The investigations described above were carried out in greater Buenos Aires. The Department plans to make subsequent studies in the interior which will examine the distinct interests and needs at different levels of teaching. Also recommended is a study to explore interests and needs of the greater Buenos Aires community in relation to the specific problems of its social structure.

Meanwhile, so that educators throughout the country can benefit from the investigations and familiarize themselves with audiovisual techniques, the Department plans to institute a televised course for research specialists on the Department staff. With these projects and studies, the Department will continue as a coordinating and technical agency.

Educational Television Commission
Faculty of Physical and Natural Sciences
University of Buenos Aires
Dr. Hugo P. Moruzzi, Executive Secretary

The Educational Television Commission was organized in August 1962 and, with financial support from the Ford Foundation for equipment and supplies, began production activities in March 1964. This Commission, which is accomplishing much with comparatively simple equipment, is currently at work on a project to produce kinscopes for use in a basic college physics course. No live telecasting is done at present, although twenty classrooms are equipped with monitors and a microwave system has been installed. The programs are recorded and later distributed by closed-circuit television. Sixty physics programs will be completed and plans are to begin to record courses in geology and chemistry as soon as possible.

The development of this project can be credited to the foresight of a handful of professors who gave it their encouragement and support because they believed they had something to contribute to new and improved methods of instruction. Professor Moruzzi believes that the basic science courses (physics, chemistry, biology, mathematics, and geology) will eventually be taught on television not only in his faculty but also in engineering, medicine, and agriculture. He has therefore invited professors from these faculties as guest lecturers for the television courses being produced for the faculty of sciences. Professor Moruzzi is frank to admit that the economics of television may be a major deterrent to future use, but for the present he is willing to experiment with quality programming.

Audiovisual Media Office
School of Fine Arts
National University of La Plata
La Plata
Nelva R. Bravis Lopez, Technical Secretary

While this audiovisual media office is not a research organization, it has made a continuous effort to experiment with new media. It is exploring, in cooperation with local high schools, the potential of teaching languages with tapes and visual materials. Teachers working with the media office are using available filmstrips and slides as a basis for recording sound to be used for language teaching at specific grade levels. A program of film evaluation is also being conducted to determine the teaching value of existing films and to disseminate this information among teachers in the Province of Buenos Aires. The primary sources of these films are the cinema department of the School of Fine Arts and the various embassies located in Argentina.

Vocational Teleschool
National Council of Technical Education
Ministry of Education and Justice
Rodriguez Pena 551, Buenos Aires

The first Argentinian vocational "teleschool" went on the air May 11, 1964, with daily programs Monday through Friday from 11:20 a.m. to 1:20 p.m. The programs are telecast over Channel 7, which, with repeaters in Rosario, Santa Fé, Pavaná, and Chivilcoy, cover an area that surpasses in amplification that of any other Argentinian channel and reaches eighty percent of the country's population.

Authorized in 1963 as the first educational television project in Argentina, the teleschool has been awarded the Martín Fierro prize granted by the Association of Television Broadcasters. It employs the most modern audiovisual techniques.

Correspondence courses to supplement the telecasts are offered by the National Council of Technical Education. Students who complete these courses receive certificates from the Council qualifying them as fashion designers and electronic technicians. Instruction is entirely without charge; only a sixth-grade certificate is required; and there is no age limit.

In 1963 the teleschool had 1,250,000 viewers in the provinces of Buenos Aires, Santa Fé, Entre Ríos, and an extensive area of the Eastern Republic of Uruguay. Of these 5,616 were registered students who fulfilled all obligations of the course.

During 1963, study guides were supplied without charge by TV Channel 7. This year the needs of the Channel and the high cost of television has made a change necessary. The sale of four-minute commercials has consequently been arranged.

Office of Educational Radio and Television
Ministry of Education, Province of Buenos Aires
Calle 54, No. 683
La Plata
Luis R. Vesco, Director

The Office of Educational Radio and Television was created by the Ministry of Education to serve the educational community of the province of Buenos Aires. While the Ministry does not own a radio or television station, the Office has been able to secure ample time over national networks to broadcast educational programs to schools and to the public. In operation only since 1963, it has already established a center of operations and developed an administrative pattern.

The office devotes almost all of its effort at present to radio. It has to its credit a series of radio programs, designed for adult audiences, in music, literature, agriculture, sanitation, and character development. Shortly after it was organized it created a primary school of the air whose programs are now broadcast daily for one hour over all stations received in the province. The Office makes guides available to teachers and students. Many students over 16 years of age who dropped out of primary school are using this medium to learn basic subjects.

Achievements off the air include an extensive audience analysis conducted throughout the province and a seminar on mass media and education held for educators of the province.

The Office continues its work with a real concern for research. The staff is fully aware that research is necessary to support future broadcasting developments within the country. At the time this report was compiled, it had undertaken a content analysis of the television programs broadcast over the only station in the province of Buenos Aires.

BOLIVIA

The Bolivian survey uncovered no centers of audiovisual activity that were an inherent part of a governmental agency or local educational institution. Reports from the audiovisual center of the U. S. AID Mission to Bolivia (U. S. Agency for International Development) and from the UNESCO Technical Mission shed some light on the level of development within the country.

Audiovisual Center
U. S. AID Mission to Bolivia
LaPaz
Victor A. Surface, Director

This Center has trained hundreds of Bolivians through short courses emphasizing the preparation and uses of inexpensive audiovisual materials. Among trainees are leaders and teachers from all parts of the country. The Center has published several useful booklets on the preparation and use of inexpensive teaching materials, as for example _La Pizarra en la Ensenañza_ (The Chalkboard in Teaching) and _Diapositivas en la Ensenañza_ (Slides in Teaching). Mr. Surface reports that the economic problems of the country prohibit extensive use of the newer media. Most school children lack such essentials as notebooks, textbooks, pencils, and chalk. Lack of electricity limits the use of projected visuals in most of Bolivia. Some experimentation with battery-powered and sunlight projectors is underway. Closed-circuit television, for demonstration purposes only, has been introduced in La Paz.

UNESCO Technical Assistance Mission
Casilla 686
La Paz
Prof. Guillermo Paíz, Director.

Filmstrips and slides projected by kerosene projectors have been used along with other visual materials in a literacy campaign coordinated through the offices of UNESCO. Many of the materials used have come from the Latin-American Educational Film Institute in Mexico City.

BRAZIL

Audiovisual Resources Service
University of Sao Paulo
Chicralla Haidar, Coordinator

The Audiovisual Resources Center at Sao Paulo is the heart of audiovisual activity in Brazil. A vigorous program of production and translation of motion pictures and other materials is complemented by a strong training program for leaders and teachers. A staff of 33 persons (17 of whom have received training in the United States) has been augmented by advisors and technical assistants financed through a U. S. AID contract with Michigan State University. This staff has been a powerful influence for the development of audiovisual activity in other parts of Brazil.

The Resources Center is under the aegis of the Regional Center for Educational Research located in Rio de Janeiro; with such a parent organization, the opportunities for research are obviously great. And while priority thus far has been given to action programs in production and training, the need for research has been expressed by the staff.

In 1962, the University of Sao Paulo announced the first audiovisual credit course ever to be offered by any Brazilian university. In addition, the staff of the

Resources Center has been successful in establishing a "train the trainer" program which offers a nine-month course to potential audiovisual leaders in other Brazilian states. After nine months in Sao Paulo, these leaders return to their respective states as audiovisual specialists to organize state audiovisual centers patterned on the federal center at Sao Paulo. Over 3,000 classroom teachers have taken special audiovisual courses, and internships in the center have been awarded to personnel in other fields.

The production output of the Center includes a sizable amount of low-cost educational materials adapted to the resources and peculiarities of the respective regions of Brazil and a limited number of original educational films for country-wide use. In addition, some 200 educational films have been translated for use in the elementary and secondary schools.

Staff members at the Sao Paulo Center have written numerous brochures, pamphlets, film guides, and general curriculum materials. The Center has also arranged for the translation of audiovisual texts.

The Center maintains a high level of activity while furnishing nationwide leadership. With the expiration of the U. S. AID contract in June 1964, the advisers from

Michigan State University left Brazil, but their leadership is reflected in the strong program that exists today. (For a more detailed account of the development of this center and the role played by the Audiovisual Center at Michigan State University, see "AV in Brazil," by Horace C. Hartsell and James L. Page in the June 1964 issue of Audiovisual Instruction.)

TV School
João Baptista do Amaral Foundation
Rio de Janeiro
Señora Alfredina de Paiva e Souza

This foundation-supported television school began operations in 1962 using Channel 13, a commercial station in Rio de Janeiro. (Television in Brazil is privately owned, but a federal law requires all networks to contribute time to educational programs.) The João Baptista do Amaral Foundation supplies the television school with programs produced in its own studio, organizes the classes, appoints monitors, and provides three books for each beginning student. The Communications Media Section of the U. S. Agency for International Development has provided videotapes for recording the programs and technical assistance and equipment for transferring the taped material to kinescope.

During 1962, the first year of its operation, the TV School filmed a 78-program series and presented it on an experimental basis to 700 illiterates. Schools were set up in factories, army barracks, jails, school buildings, union halls, and clubs. Three one-hour classes were held each week, generally in the evening. During 1964, approximately 60 thousand students were enrolled in the beginners course. Two courses were being offered at that time--a repeat of the experimental course for a larger audience and an advanced class for those who had passed the first experimental course.[1]

The UNESCO-IBECC Pilot Project for New Methods and Techniques in Physics Teaching in Latin America
The Brazilian Institute of Education, Science, and Culture (IBECC)
Caixa Postal 2921
Sao Paulo
Dr. Isaias Raw, Scientific Director, IBECC

New instructional methods and techniques, primarily in the teaching of basic sciences, were explored in the UNESCO-IBECC Pilot Project conducted in Sao Paulo from July 1963 to July 1964. The study was centered on the application of programmed self-instruction; the use of simple inexpensive kits of laboratory equipment; the development of short, silent 8mm films as well as longer 16mm films with sound; and the role of television. The topic treated was one of the most important in modern science--"The Physics of Light." The Project engaged three staff members appointed by UNESCO, three part-time consultants, and 26 teachers of physics from eight Latin-American countries--Argentina, Brazil, Chile, Cuba, Ecuador, Honduras, Peru, and Venezuela.

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[1] Adapted from UNESCO Features, No. 429, Paris, December 20, 1963.

The work of the project was carried out in cooperation with the Sao Paulo branch of the Brazilian Institute of Education, Science, and Culture (the Brazilian national commission for UNESCO). It also had the support of the Audiovisual Resources Service at the University of Sao Paulo, the Regional Center for Educational Research, and the Physics Department of the University of Sao Paulo, the Regional Center for Educational Research, and the Physics Department of the University of Sao Paulo. The major financial support for participants came from the Latin American Physics Center which provided fellowships for seven participants. Apart from this source, fellowships were contributed by Latin-American governments, universities, national commissions for UNESCO, UNESCO itself, and the U. S. Agency for International Development. UNESCO set aside $140,000 from its regular budget for salaries, equipment, film production costs, etc.

By March 1964, participants in the project had developed a course on the physics of light for the secondary-school level. Designed as an intensive four-weeks course for teachers, it is in the form of a programmed text supplemented by laboratory kits and films. The text, published in both Portuguese and Spanish, has four units providing 40 to 50 hours of independent study.

Experiments utilizing simple kits of inexpensive laboratory equipment play an important part in the course. The project staff, benefiting from the experience and workshop facilities of IBECC which has been producing and distributing such kits in Brazil for the past ten years, has produced seven kits for the course. These kits are so intimately connected with the programmed text (in a way which has never before been attempted in Latin America) that it is impossible to follow the course without the kits and accompanying "laboratory manual."

Experiments of fundamental importance to the course but too expensive, dangerous, or difficult for a kit, or even for an instructor to demonstrate, are shown on film. Of special interest is the development of 11 four-minute silent 8mm films, packed as continuous loops in special cartridges for relatively inexpensive projectors. Sixteen-millimeter sound films are used to teach broader concepts involving more difficult experiments. One such film (the first of its kind to be produced in Latin America) was made by the project participants in cooperation with the University of Sao Paulo Audiovisual Resources Service and the Regional Center for Educational Research.

The distribution of the films, particularly the 16mm sound film, has focused attention on the use of television in science teaching. Four television programs have been produced for the course, one for each chapter of the text. The film developed by the project participants is one of these; the other three picture a teacher on the screen working simple experiments, showing film loops, and giving instruction in the use of texts and kits. Three experimental test programs have been broadcast over two television channels in Sao Paulo.

The project participants have now returned to their home countries with the materials they themselves produced. A period of evaluation and developmental activity in these countries has begun.

Regional Center for Educational Research
Rua Voluntarios da Patria 107
Caixa Postal 1--Botafogo
Rio de Janeiro
Doña Letticia M. Santos de Faria, Head of the Audiovisual Section

The Regional Center for Educational Research, the largest such research center in Brazil, serves also as the central office for six other educational research units in the country. The primary function of the Regional Center is to provide an information and documentation library on pedagogical literature. It sponsors in addition a large experimental elementary school.

The Audiovisual Section, with Doña Letticia M. Santos de Faria as chief and Michael J. McCarthy as her associate, is part of the Center's operation. No research on the new media has been undertaken as a function of the Center; this Latin-American survey has however served as an impetus for the collection of data on the status of audiovisual media throughout Brazil. The project is being conducted by Doña Letticia. The major responsibilities of the audiovisual section which she heads include demonstrations, courses, film distribution, educational television consultation, and coordination of local resources. Production is limited largely to slide sets with accompanying teachers guides.

Agency for International Development
Communications Media Section
Rio de Janeiro
Kenneth Skirvin, Chief
Roberto Coaracy, Assistant to the Chief

This office provides a stimulus for audiovisual progress in Brazil. The Michigan State University contract program at Sao Paulo was first given impetus from this Communications Media Section. This office has published an audiovisual magazine, Audiovisual em Revista, every other month since 1959. Five thousand copies of each issue are printed and even more are requested. Simple production ideas are the core content of this publication.

Assistance to local educational television production comes from this center. About 20 percent of a series of television programs for teacher improvement were devoted to the improved use of audiovisual materials. Cooperation with a literacy series, is a continuing project.

The five regional audiovisual centers which have been established receive nominal support from this Section.

In addition to the activities mentioned above, the Communications Media Section serves the personnel of the AID mission in Brazil through the production and consultation about the use of media in communicating ideas to the people of Brazil.

CHILE

Audiovisual Department
The University of Chile
Huerfanos 1117, Oficina 410
Santiago
Carlos Fredes, A., Director

The Audiovisual Department of the University of Chile is an agency independent of any of the University's faculties. It offers neither audiovisual courses nor any of the other services traditional to audiovisual centers in North American universities. It exists to serve the community at large rather than the university _per se_. The Department supports an experimental motion picture production unit and a film library, but its largest single enterprise is the operation of a TV station (Channel 7).

In Chile there are no commercial TV stations; television is in the hands of two universities--the University of Chile and the Catholic University of Santiago. In the past when commercial interests attempted to establish the right to operate stations, they were strongly opposed by a national movement headed by university rectors who believed that university control was the best defense against free and indiscriminate use of television.

But, whereas commercial television is banned, neither does there appear to be any evidence of full-scale support for educational television. A research project carried out from 1961 to 1963 by the University with the cooperation of teachers, educators, and technical experts reveals some doubts about television as an instructional device. These negative attitudes can best be understood by looking at the country's economic situation. Chileans lack so much in their schools and daily lives that they question the initial expenditure to equip their schools with television. Furthermore, the government in its opposition to commercial television has imposed high taxes on the sale of TV equipment. Consequently there are few TV sets in Chile. In Santiago alone, where the population reaches nearly two million, there are but 50,000 sets.

The University's audiovisual department thus acts as a public service agency using the television medium as a communication tool to accomplish four major objectives: (1) to provide general culture to all of the population; (2) to serve in an audiovisual capacity to higher education; (3) to be a graduate school; and (4) to set in motion the accelerated development of labor.

The University of Chile has its own ballet, symphony, museums, and other cultural attractions. In one year it transmitted 32 complete theatrical works over television.

Both television stations in Chile (the one at the University of Chile and the other at the Catholic University of Santiago) permit commercials but they are required to be brief and can make no mention of the value of the merchandise advertised. Witticisms are banned; only posters with the names and uses of the advertised products are allowed.

Manuel de Salas Experimental High School
University of Chile
Brown Norte 101
Santiago
Señora Viola Soto de Pinto, Technical Advisor

While the Audiovisual Department at the University of Chile is occupied largely with the operation of TV Channel 7, other faculties and individuals within the University structure have begun to organize audiovisual services and to run experiments in the new technology of instruction. One such center is the Manuel de Salas Experimental High School whose technical advisor, Señora Viola Soto de Pinto has traveled widely in Europe, Japan, and North America observing educational television and other audiovisual programs. Some of the best ideas from Chile as well as from other countries are tried at Manuel de Salas which is operated by the University of Chile as a base for new secondary-school programs.

In 1962 an extensive closed-circuit instructional television experiment was conducted with the classes at Manuel de Salas serving as the experimental and control sections. (The results of this study are reported in the research section on page 76 .)

The school has a full complement of traditional audiovisual equipment and uses it to its fullest capacity. Mrs. Pinto's experience abroad serves as a continuous stimulus to attempt new concepts in teaching. Her scholarship in the audiovisual field was recognized internationally when UNESCO published her recent work on audiovisual materials under the title, Developments in Audio-Visual Education.

Audiovisual Department, School of Medicine
University of Chile
Zañartu 1058
Santiago
Dr. Rene Rossel V., Chief

This audiovisual department is organized to handle the unique media requirements of the School of Medicine of the University of Chile. Dr. Rossel serves as coordinator to help faculty members in medicine, dentistry, and physiology obtain and use audiovisual instructional materials. He has promoted the loan of a closed-circuit television system to determine the possible uses of this medium in the teaching of medicine. Working with the University's Audiovisual Department, he has helped to develop a production program of medical motion pictures and has secured specialized films through the various embassies and pharmaceutical concerns located in Chile. Dr. Rossel has also directed the construction of major medical exhibits for the information of the public in and around Santiago. The expanding audiovisual program of the School of Medicine can be attributed largely to the determined efforts of this one man.

Audiovisual Department
Teachers College, University of Chile
Avenue Grecia
Santiago
Ricardo Cornejo, Director

The Audiovisual Department of the Teachers College was established in 1963 during the author's tenure as a Fulbright professor. It presently serves as a consultation center for pre-and in-service teachers; as a source of personnel for workshops and short courses; and as a center for the production of simple, inexpensive instructional materials. It is also a source of audiovisual equipment for the faculty of the Teachers College.

University of Concepción
Concepción
Rudy P. Guerrero, School of Journalism
Sofia Aliste de Moreno, School of Education
Leonardo Soderman, English Department

The University of Concepción boasts no coordinated educational media program, but it has among its faculty members a core of well-trained personnel who are qualified to provide leadership in this area.

In the School of Journalism, Señor Guerrero offers courses that draw upon the audiovisual training he received at Indiana University under a one-year program sponsored by the U. S. Agency for International Development.

Señora Moreno, who completed her graduate study at Ohio State University, offers audiovisual courses in the School of Education, the only such courses offered regularly in Chile.

Señor Soderman is well-versed in language-laboratory developments and applies these competencies to the teaching program of his English Department. He has organized two rather extensive language laboratories and has experimented with combined audio and visual stimuli in presenting information to students.

The University of Concepción owns and operates a non-commercial educational radio station which is handled by still another department.

Latin-American Center for the Preparation of Educational Specialists
UNESCO
Merced 152, Santiago
Jorge Carrasco V., Audiovisual Coordinator

This UNESCO-sponsored training centers offers one-year scholarships to potential educational leaders throughout Latin America. An important aspect of the participant's one-year experience at the Center is to investigate the potentials of audiovisual media for the solution of educational problems within his home country.

Señor Carrasco has established an audiovisual office to serve the faculty of the Center with materials and equipment necessary to an on-going program. He also serves as a faculty member of the Center and offers short courses to students. The audiovisual office houses a wealth of equipment and an adequate film library.

Institute of Educational Film
Ministry of Education
Alameda Bernardo O'Higgens 264
Santiago
Señora Inés Roncagliolo B., Director

This Institute is an agency to coordinate the use of educational motion pictures for the entire country, but devotes its efforts largely to the greater Santiago area. It serves primarily as a film library and equipment distribution agency and while it produces a certain number of films, most of its stock for distribution comes from embassies and other commercial and governmental agencies in Chile. Some titles are Spanish versions of older educational films produced in the United States.

Teachers can request films, equipment and an operator from the Institute. Projectors for filmstrips and slides are also available. But because of the great demand for films and the limited personnel of the Institute, not all requests can be honored.

The Institute carries on a program of film evaluation, and previews all educational films available in Chile.

Ministry of Education
Education Planning Commission
Alameda Bernardo O'Higgens 1611
Santiago
Oscar Vera, Director

This Commission, which is concerned mainly with educational development on a broad scale, has promoted the inauguration of a materials center. To assist in its planning and development, UNESCO financed the advisory services of José Kimball, a Mexican audiovisual expert.

In the planning stage at the time this monograph was prepared, the Center was expected to house a book library and a film and filmstrip library from which materials would be both rented and sold. The plans also included the distribution of equipment to teachers, at cost, and facilities for the production of inexpensive instructional materials.

The Ford Foundation and the U. S. Agency for International Development granted the initial funds for the project.

COLOMBIA

Ministry of Education
Program of Educational Television
Bogotá
Alfredo Porra Rojas, Coordinator

After two unsuccessful attempts to introduce educational television in Colombia (in 1955 and 1960), a program was established in 1963 by an agreement between the governments of that country and the United States. The two-year program, which should be self-supporting at the end of the experimental period, is an integral part of the Colombian educational system.

The telecasts, produced for Grades 1 through 5, supplement classroom instruction in the four basic areas of language, mathematics, social science, and natural science. For optimum utilization, the programs are telecast at 11 a.m. on Mondays and Wednesdays and repeated on Tuesdays and Thursdays at 5 p.m. Guides are distributed in advance to classroom teachers who also attend training sessions before the series begins. Every attempt has thus been made to alleviate the errors of the earlier efforts and to insure acceptance and good use.

At present, 250 public schools in Bogotá and 250 in Cundinararca area have receivers, and the programs are being favorably received in these schools. The next step will be to install an additional 1000 receivers in other parts of the country.

Teams from Stanford University and the Colombian Ministry of Education are conducting an extensive evaluation, and U.S. Peace Corps Volunteers are rendering technical assistance to the project.

National Audiovisual Aids Center
Ministry of Education
Bogotá

This Center, only recently established within the administrative structure of the National Ministry of Education, is still in the formative stage. The Minister of Education has stated its objectives as follows:

. To investigate the relations of audiovisual media to educational needs at all levels of education.

. To produce and distribute audiovisual materials among educational training officials.

. To disseminate information about these materials and to sponsor and promote them in all educational establishments.

. To conduct an evaluation program to insure the best possible use of these materials.

. To acquire, exchange, and adapt audiovisual media.

. To coordinate the activities of this service with similar agencies, foreign and national, in order to insure the best climate for production, adaptation, and utilization of audiovisual media.

The first step being taken to implement the above objectives is a four-year plan, now underway. It includes courses for elementary teachers and supervisory personnel which provide information on the value of audiovisual media, and training in utilizing them. A second step, now in the planning stages, is the organization of work groups to investigate in some depth the unique uses and advantages of each medium and to serve as consultants at all levels of education within the country.

COSTA RICA

Inter-American Popular Information Program
Apartado 1587
San José
Dr. H. Schuyler Bradt, Jr., Director
Dr. F. B. Waisanen, Director of Research

More basic research on communication as a social process is handled by the Inter-American Popular Information Program than by any other single organization in Latin America. The research is governed by accepted principles of scientific research and cuts across broad segments of Latin-American life as they relate to social change. Studies completed and in process are reported in the research section of this publication.

The Program has its headquarters in San José, a field office in Montevideo (Uruguay), and serves all of Latin America. Its fundamental purpose is to raise Latin-American living standards through improved communication about social and economic change. To attain this broad purpose, it attempts to stimulate research on communication and social change among Latin-American social scientists and assists in the dissemination of research results which relate to these issues.

The Program works with the Inter-American Institute of Agricultural Sciences and the American International

Association. (The Institute was established by the Organization of American States; the Association through the support of the Rockefeller Brothers Foundation.)

Inter-American Institute of Agricultural Sciences
Tropical Center of Graduate Research and Education
Scientific Information Service
Turrialba
Juan Diáz Bordenave. Chief

The Inter-American Institute of Agricultural Sciences was founded by the Organization of American States in 1944 to promote economic and social development through education and research. Regional offices are located in Peru and Uruguay. The primary emphasis of the Institute's Scientific Information Service at present is on the exchange and documentation of scientific information on agriculture, but it is also heavily engaged in communications training and consultation and in the preparation of teaching materials in this field. Research is normally conducted in cooperation with the Inter-American Popular Information Program of the American International Association with headquarters in San José.

DOMINICAN REPUBLIC

The survey revealed no organized media activity related to an educational enterprise.

ECUADOR

International Center of Advanced Studies in Journalism
for Latin America
University City
Apartado 584
Quito
Jorge Fernández, Director

The Center of Advanced Studies in Journalism is supported largely by UNESCO. It is essentially a mid-career training program for Latin-American newspapermen but from time to time carries on research studies dealing with the press. Journalists and journalism educators around the world are invited to the Center to lecture for brief periods. Generally, students come from all parts of Latin America.

U.S. Agency for International Development
Audiovisual Center
Quito
Miss Hazel O'Hara, Director

This Center is an integral part of the U.S. AID mission to Ecuador. It provides media services to personnel of the mission and has assisted in a major research project concerned with the experimental use of media to promote community development

2

EL SALVADOR

Ministry of Education
San Salvador
Gilberto Aguilar Avilez

The government of El Salvador plans to initiate its first educational television program in 1965. A commission designated by the government has recommended early morning telecasts for a program in fundamental education. The telecasts will be a cooperative effort of all television stations in El Salvador working through the national television center at San Salvador. A 1965 budget of $300,000 has been earmarked for the planning, study, and production of this program, the country's first venture in educational television.

GUATEMALA

National Educational Television Commission
Guatemala City
Ricardo Peña Pinto, Coordinator

The National Educational Television Commission incorporates the interests of the Ministry of Public Education, the U.S. Information Service, the University of San Carlos, Civil Action of the Army, and the management of TV Channel 3 all within the concept of the Alliance for Progress program for Guatemala.

Programs at three levels are on the air each week:

"We Read" (TeLeemos), a daily literacy program for adults; "Television Classroom" (TeleAula), a daily program for students and teachers at the secondary school level; and "Television University" (TeleU), a weekly program for the university level and for general cultural purposes.

The intent of this television enterprise is to use the well-recognized multiplier effect of television to bring the relatively few outstanding teachers in the country to the large segment of the population which needs to be taught.

Ministry of Education
Guatemalan Audiovisual Center
8 Avenida 4-15, Zona 1
Guatemala City
Arturo Matute García Salas, Director

HONDURAS

The survey revealed no organized media activity related to an educational enterprise.

HAITI

Audiovisual Center
National Office of Adult Education
Dean's Office, State University
Rue Capois
Port-au-Prince
Weber Guerrier, Director

Section of Radio Broadcasting
Office of Coordination and Information of the Secretary of State
National Palace, Post Office Box 224
Port-au-Prince
Jacques P. Pierrot, Chief

Haiti's single television station began operation in 1955 in the capital, Port-au-Prince. The only educational telecast received by the 4,700 sets in the country is concerned with literacy. The program is part of a major literacy campaign sponsored by the National Department of Education.

MEXICO

General Office of Audiovisual Education
Secretariat of Public Education
Calz. Circunvalación y Tabiqueros
Mexico 2, D.F.
Prof. Esteban Chávez Chávez, Director

The Mexican General Office of Audiovisual Education is one of the most comprehensive educational media centers in Latin America. The central office is housed in a new three-story building in Mexico City, with two older buildings offering additional space for the multifarious activities of this center. There are, in addition, regional centers serving every state.

Activities of the General Office include:

. Production: Filmstrips, slides, television programs, radio programs, exhibits, flip charts, flannelboard kits, posters, models, and printed materials are produced regularly.

. Utilization: In-service courses for teachers are offered the year around.

. Distribution and sale: Films are loaned to schools free of charge and simple materials such as flannelboard kits are sold at cost.

. Evaluation: Pilot programs are studied in systematic fashion.

. Promotion: Through the regional centers, educators are encouraged to utilize media effectively.

. Cooperation: National organizations and international organizations located within the country work with the General Office.

. Training: Personnel prepare themselves to staff the regional offices through an internship in the Mexico City center.

Over 300 persons are employed, 100 of them in the regional centers. Staff members function in seven operating divisions with 32 departments. The major divisions include a technical section; a production unit for the various simple media (photography, graphics, model-making, etc.); radio, television, and film production; radio and television broadcasting; coordination of centers; distribution; and administration.

The General Office has been responsible also for the production of educational television programs presented over commercial channels in Mexico City since 1953. From that time until 1960, the School of the Air was offered each week for one half hour. The telecasts were directed to the Mexican home with cultural and educational information on topics related to elementary-school content.

From 1960 to 1963, a program directed to kindergarten classes and specializing in early childhood activities, was telecast for one half-hour weekly under the title, "Children are Like This" (Los Ninos Son Asi).

Since 1962, the General Office has presented "Cultural Message" (Mensaje Cultural) for 15 minutes each week. The series is intended for adults and students of the intermediate grades and includes topics of general interest such as archeology, history, civics, arts, and social action.

All of the television programs are filmed before the telecast and can thus be used later as motion pictures.

Department of Audiovisual Education
National Polytechnic Institute
Carpio No. 475
Mexico 17, D.F.
Prof. Estaban Chávez Chávez, Chief

The six-month intensive training program offered by this Department is, so far as this study could determine, the only audiovisual course taught on a continuing basis in

Latin America. The Department also administers a comprehensive program of services to the Polytechnic Institute faculty. The six-month training course, which requires teacher certification for entrance, covers the technical and managerial aspects of audiovisual education to prepare specialists for all levels and areas of teaching. Upon completion, the student should be able to (1) organize centers for the production and distribution of audiovisual teaching materials; (2) disseminate information about the use of audiovisual resources; (3) serve as instructors of audiovisual methodology in centers where educational planning is being developed; and (4) introduce audiovisual materials into business and industry to improve the capabilities of employees.

The curriculum includes courses in the techniques of audiovisual education, graphic arts, photography, cinematography, equipment operation, educational television, sound recording and reproduction, materials production, and the organization of audiovisual centers.

The Department administers its service program through four offices. These four offices--technical, production, service, and administrative--supervise the activities of 21 service-oriented sections to provide the faculties of the Polytechnic Institute with a wide range of media services.

In 1959 the Institute inaugurated a VHF channel devoted exclusively to cultural and educational programs. The station covers the area of Mexico City and telecasts daily from Monday to Saturday. It offers programs on general culture, art, drama, and music, and courses in mathematics, physics, and languages. From time to time teachers use these courses as supplementary teaching aids in the classroom.

Latin-American Educational Film Institute
Auditorio Nacional
Paseo de la Reforma
Mexico City
Miguel Leal A., Director

Situated in Mexico City and supported by the Mexican government and UNESCO, the Latin-American Film Institute appears to be a key center for the promotion of educational media programs in Latin America. It serves as a production unit for educational motion pictures and filmstrips, selling its materials at cost in all Latin-American countries. It also makes equipment available at cost. The current filmstrip catalog lists over 250 titles at $2 each in color and $1.20 in black and white. Filmstrip-slide projectors are sold at $46 apiece. A library and reference service is also maintained.

Periodically the Institute offers seminars in educational media to specialists from all part of Latin America, and increasingly, it shows enthusiasm for participation and leadership in educational television activity. In June and July of 1964 it conducted a seminar on that topic, open to participants from every Latin-American country.

Audiovisual Department
Technological Institute of Advanced Studies
Monterrey, Nuevo Leon
Fernando Esquivel Junco, Director

In January 1963 the Ford Foundation announced that it had funded a pilot program in the use of closed-circuit television to be conducted by the Technological Institute of Advanced Studies, with the University of Texas serving in an advisory capacity. Telecasting began in September 1964. In preparation for the initial course, in chemistry, a professor from the Institute videotaped a course at the University of Texas. An accounting professor followed suit upon completion of the chemistry taping. Approximately 60 programs each were produced for the chemistry and accounting courses. In addition, a short course (eight sessions) in scientific and technical bibliography was videotaped for continual use. Indications are that all television courses for internal use at the Institute will be on videotape.

Another aspect of this project began in September

1964 when weekly programs were telecast to a nearby school by closed circuit. Twenty-minute programs in the geography of Mexico (fourth grade), American History (fifth grade), and natural and physical sciences (sixth grade) are being telecast.

In September 1965 commercial channels will be tapped to broadcast three 30-minute programs each week to workers employed in the various industries of the city of Monterrey. Professors at the Institute will videotape these programs which will bear on the interests and needs of the workers. The first telecasts will be planned around safety and other such themes that relate to the worker at his job. Later, mathematics, reading, and writing will be offered. A total of 144 programs will be completed the first year.

An advisory committee with members from Argentina, Brazil, and the United States meets periodically at Monterrey.

University of Mexico
Mexico, D.F.

A Mexican law governing radio and television broadcasting establishes a minimum of one half-hour daily for cultural programming. The University of Mexico has used this time on commercial channels to present general cultural programs. The Faculty of Medicine uses two closed-circuit systems for teaching. One system is in color and the other is adapted for micro telecasting.

NICARAGUA

Caroles Pérez Meza
Art Director for Television
National Television of Nicaragua
Managua

Nicaragua had educational television as early as 1958, two years after the introduction of commercial television. At that time elementary-level progrmas in mathematics, Spanish, history, and geography were telecast twice weekly, each for 15 minutes. In 1960 a program emphasizing patriotic and folkloric themes was initiated through the use of puppets. Since 1963 a pre-school program "Little Road to the School" (Caminito de la Escuela) has been offered with much success. The program is a joint effort of the normal schools of Nicaragua, the Alliance for Progress, and the Ministry of Public Education.

Prof. Julio C. Maltez
Chief of Audiovisual Aids
Ministry of Public Education
De la Prensa 1 cuadra abajo
Managua

The audiovisual aids unit is a newly organized section within the Ministry of Public Education.

PANAMA

This survey disclosed no major organized audiovisual effort in Panama. A modest closed-circuit television system is utilized in the Faculty of Sciences at the University of Panama for classroom demonstration where image magnification is required.

PARAGUAY

The state of educational media activity in Paraguay is summed up by two statements from that country. A correspondent wrote: "Beyond the wall charts traditionally used in classroom study in the sciences, there is virtually nothing in the way of audiovisual research and experimentation going on in Paraguay at the present time. No university nor any department of the ministry of education is devoted to developments along these lines."

A Paraguayan reporter at a Latin-American conference on educational television commented: "There is nothing in the way of educational television in Paraguay for the simple reason that commercial television does not yet exist."

PERU

Inter-American Institute of the Agricultural Sciences
Zona Andina
Apartado 470
Lima
Luis Ramiro Beltrán

The Inter-American Institute of Agricultural Sciences is one of the regional offices of the OAS Scientific Information Service which has its headquarters in San José, Costa Rica. The specialists located here assist in the communications research activities sponsored by the parent organization.

Ministry of Public Education
Parque Universitario
Lima
Fernando Semillán C., Producer, Channel 7

URUGUAY

Nilda González Genta, Director
National Council of Elementary and Normal Education
Educational Radio and Film Section
Piedra Alta 1884
Montevideo

Established for over 40 years, this agency serves the audiovisual needs of the elementary schools of Uruguay. It also sponsors the production of educational motion pictures.

Audiovisual Aids Section
School Radio
Conelones 2073
Montevideo

Justino Zavala Carvalho
Director of Television Programming
Official Service of Radio Broadcasting
Colorado No. 2362
Montevideo

Uruguay has a single government-supported TV station that telecasts programs of a cultural nature, but none that can be called educational or instructional. None of the programming is directed to in-school use.

H. Calvert Anderson
Inter-American Popular Information Program
Casilla 5060
Sucersal 1
Montevideo

As one of the regional offices of the Inter-American Popular Information Program, this branch serves southern South America. It assists in the research and dissemination program of the headquarters organization located in San José, Costa Rica.

Dr. Rodolfo V. Tálice, Director
Institute of Cinematography
National University
Avenida Ricaldoni 3051
Montevideo

VENEZUELA

Audiovisual Center
Ministry of Educatión
Esq. Caja de Agua y Esq. de El Cuño
Prof. Luis Delgado, Director
Prof. Juan Torres, Assistant Director

The Ministry's audiovisual center is active in the production of educational television programs for pre- and in-school use. Programming is made possible through the cooperation of the Center, the government-supported television station (which is under the Ministry of Interior Relations) and commercial television stations.

For one hour each morning a commercial channel in Caracas telecasts two programs for use in the secondary schools. Likewise, three 20-minute programs are broadcast for the elementary schools during one afternoon hour, Monday through Friday. The latter include Spanish, arithmetic, and natural or social sciences. In addition, a pre-school program which has been on the air continuously for over four years, is telecast for one hour daily. It is beamed to home and kindergarten. A study to determine its effectiveness is reported on page 74 in the research section.

Two adult education programs are also produced by the Center in cooperation with other agencies. One is a literacy series; the other, for housewives, deals with homemaking problems.

Modern Methods in Teaching Service
Research and Extension Teaching Department
Teachers College
Caracas
Prof. Antonio José Medina, Chief

Until it was suspended recently because of a departmental reorganization, this specialized service operated by the teachers college of Caracas carried out the traditional functions of an audiovisual center. It assisted pre-service teachers and college faculty members in the selection, evaluation, and utilization of instructional materials and in the production of new materials. It also distributed filmstrips and teaching courses. A recent report indicates that it offered courses in educational television and in the theory and use of audiovisual media. These services, rendered since 1960, were suspended at the time this report was compiled because of a reorganization of the Research and Extension Teaching Department.

RESEARCH ABSTRACTS

The bulk of the research reported in this section cannot be characterized as "hard-core," carefully designed research, but it represents an honest attempt to obtain information upon which to base the design of new materials and programs. It reflects a liberal interpretation of educational media which includes media used in general communication as well as in formal education. Thus, for instance, a study involving the visual communication of information about selection of seed corn is reported because it is based on concepts of communication that in this cultural region are equally as valid for programs of formal instruction as for adult education. Included also are reports on systematic evaluation of media utilization.

The author has no doubt that programs of educational media research, in the strict definition of the term, will be initiated in Latin America once qualified researchers are available, or once personnel in the field can be trained to handle research tasks with some competency. The need for such research has been expressed repeatedly by media specialists in this part of the world.

The author assumes reponsibility for the abstracts in this document. He is aware that the compilation is not exhaustive. A number of known studies could not be located; others that did materialize were eliminated because they were not fully reported.

RADIO

The Use of Radiophonic Teaching in Fundamental Education, May, 1963.

Roper Opinion Research Center at Williams College, Williamstown, Massachusetts, under a grant from the U.S. Office of Education. John Brodbeck, chief investigator; William G. Rhoads and Anson C. Piper, project directors.

Purpose: To survey radiophonic schools of the Catholic Church in El Salvador and Honduras in order to (1) evaluate the medium in terms of listeners' achievement, satisfaction, and use of acquired knowledge; (2) identify attitudinal factors related to participation and achievement; (3) identify social and cultural factors related to listener participation; and (4) gather information on the nature of listening groups.

Procedures: The research team chose sample parishes, made a random selection of all listeners 15 years of age or older, and through the parish priests, arranged for interviews. The interviews dealt with (1) literacy achievement and its effect on the listeners' attitudes, his receptivity to the programs, and his environment generally as it related to the radio school; (2) achievement of listeners in applying the knowledge acquired to agriculture and sanitation; (3) the amount of satisfaction listeners derived from participating in the radiophonic courses. A brief literacy test was administered during the interview.

Results: Literacy was found to be higher among younger people, those who live in the better dwellings and own the most land or livestock and those who have taken recent steps to improve their future. In El Salvador, 15 per cent of the literates said they had learned to read through the radiophonic school. A majority of interviewees considered agriculture to be the most important subject offered by the radio school and it accounted for the generally favorable opinion of the school. The main problem of school administrators who conduct the schools was reported to be the lack of facilities to train teachers.

TELEVISION

Symbolic Systems and Change Orientation: A Study of Participants, and Comparable Non-Participants, in a Television Literacy Teaching Series, in Progress.

Inter-American Popular Information Program (F. B. Waisanen and William R. Lassey); The American School at Guatemala (Robert B. MacVean, director); and the Nutrition Institute of Central America and Panama (Alfredo Méndez, chief anthropologist).

Purpose: To measure the impact of a television literacy teaching series on communication behavior, proclivity toward change, attitudes toward television teaching, levels of aspiration for self and children, and other variables.

Procedures: Participants in the television literacy series are being compared with illiterates, new literates from other literacy programs, and fully literate individuals. The sample of approximately 1,000 subjects was drawn from TV and other literacy teaching centers in Guatemala City and from villages within 50 kilometers of Guatemala City. Subjects for the comparative samples were drawn from participants in Laubach-Koinonia literacy courses, adult literacy classes sponsored by the ministry of education, and from household heads in five villages. Interviews of approximately one-hour duration were conducted by six trained interviewers employing a pre-coded schedule of questions.

Results: First reports were expected by June 1, 1964.

Instructional Television in the Kindergarten, November, 1961.

Audiovisual Center, Ministry of Education, Caracas, Venezuela. Carlos Izquierdo, chief investigator.

Purpose: To provide kindergarten teachers with new pedagogical and technological information in order to achieve a more effective use of audiovisual materials; and to involve the community in the work of the kindergarten.

Procedures: For two months programs were telecast daily to 14 schools over a commercial TV channel in Caracas. One carefully selected teacher served as television teacher. During the experimental period, this teacher chose the subject matter, wrote the scripts, requested AV materials, presented the programs, and met every other week with all classroom teachers participating in the project. A planned evaluation was carried out through the use of daily control sheets, interviews with classroom teachers and parents, and visits to the participating classrooms. More than 1,800 pupils in 30 kindergartens saw the programs each day.

Results: Introductions to all programs were deemed stimulating by 73 per cent of the teachers, and acceptable by 27 per cent. Closings were good according to 98 per cent; very fast according to 2 per cent. Of the teachers, 95 per cent thought the visual materials sufficient; 5 per cent thought there were too many. All teachers thought the television teacher made good utilization of the AV materials on television. Of the teachers, 62 per cent felt that their students were highly motivated; and 3 per cent judged them not motivated at all. Student behavior was pronounced satisfactory by 96 per cent of the teachers. All teachers indicated that the programs enriched their professional preparation and increased the capacity of their pupils to see and listen. Of the 584 parents interviewed, 82 per cent thought the programs "very good"; 18 per cent pronounced them "good."

A Study of Educational Television in Three Parts, 1962.

Manuel de Salas Experimental School, University of Chile, Santiago. Viola Soto de Pinto, chief investigator.

PART I: "Educational Television Project To Teach History of the Middle Ages and Modern Times to Tenth-Graders"

Purpose: Three groups were established. The history course was taught to one group partly by the classroom teacher and partly by television. The classroom teacher did not repeat the television material; she enriched it. The other two groups were taught without television. In all three groups, one teacher presented the regular course material and a second the enrichment aspects.

Results: On questions related to interpretation and description, students who received television instruction did significantly better than those who were taught without it. Achievement on questions referring to fact was not affected significantly.

PART II: "Educational Television Project To Teach Spanish in the Fifth Grade"

Purpose: To determine the effectiveness of television in supplementing conventional classroom procedures in teaching Spanish to fifth-graders.

Procedures: Three groups were formed. Group A, the trial group, was taught Spanish in conventional manner by one teacher and given complementary television lessons by another. Control Group I was taught in a traditional manner by one teacher only. Control Group II was taught traditionally by one teacher and given complementary lessons in class by the television teacher of Group A. All groups were rotated after eight lessons so that all were exposed to similar experiences during the experiment. Equivalent subgroups from the control and trial groups were formed and pre- and post-tests administered.

Results: The influence of television was not significant.

PART III: "Educational Television Project for the Teaching of French in the Seventh Grade"

Purpose: To compare the effectiveness of television for large-group instruction in French with traditional methods of teaching French to normal-sized groups.

Procedures: Two equivalent groups were formed--a trial group of two seventh-grade classes and a control group taught by one of the trial-group teachers. A pre-test in French was given to all students, and two equivalent subgroups formed, one from the control group and one from the trial group. The trial group received televised instruction for one hour each week and traditional instruction without TV for the other two hours. The control group received no televised instruction. All classes followed the same methods of study and attempts were made to have all classes progress at the same pace. A final test similar to the pre-test was administered.

Results: Scores on the final test showed no significant difference in the achievement of the different groups. The researchers felt, however, that the short duration of the experiment did not allow the full potential of television to be exerted.

MULTI-MEDIA

Communication and Motivation in Community Development: An Experiment, November, 1963.

American Institute for Research, Institute for International Studies, Washington, D.C. Paul Spector, chief investigator.

Purpose: To test a number of communication media in the realistic circumstances of a developing society and to determine in each of several circumstances which medium is most effective as an agent of persuasion. Secondly, to search for practical means of implementing U.S. technical assistance as economically as possible.

Procedures: The project directors used three modes of communication to induce communities in the Andean highlands of northern Ecuador to undertake certain innovations. The three modes tested were: (1) radio; (2) a combination of AV media including posters, motion pictures, slides, demonstrations, and exhibits; and (3) a combination of radio and AV media. Each mode was applied to one of three comparable and mutually isolated towns of approximately 100 households. The innovations to be promoted were chosen so that results could be measured objectively. They included (1) the construction of outdoor latrines; (2) the building of indoor cook stoves with chimneys; (3) the preparation and canning of marmalades from local fruits; and (4) vaccination against smallpox. Three control towns were given materials, services, and instructions, but no attempt was made at persuasion.

Results: A systematic information campaign is more effective than an undirected program in persuading people to participate in community betterment. The radio mode and the AV mode is each superior to the other for certain practices. Radio is especially suitable for (1) persuading women to undertake both cooperative and individual practices which are of relatively low cost and have easily perceived benefits; and (2) for inducing people to participate in free public health practices such as immunization. The AV mode is superior for inducing men to undertake cooperative construction practices involving relatively high costs and deferred benefits. Although it is more costly than either mode alone, a combined radio and AV mode (demonstrations, motion pictures, slides) are more effective than radio for giving instruction about specific procedures. The radio mode carries more weight with literate and better-educated persons than with illiterate and uneducated persons.

GENERAL COMMUNICATION RESEARCH

Perception, Diffusion, Adoption of Change, and Audience Analysis

Analysis of the Pamphlet Without Words on the Selection of Seed Corn, May, 1957.

American International Association, San José, Costa Rica.

Purpose: The limited usefulness of the traditional mass media of communication to reach illiterate populations and people with diverse dialects prompted the American International Association to prepare a pamphlet without words. Two major objectives were defined: to determine the existing knowledge about the selection of seed cord among small farmers of Venezuela; and to study the communicative value of a pamphlet without words.

Procedures: The research team prepared a pamphlet with 23 drawings illustrating practices in the selection and use of seed corn and composed a questionnaire based on the pamphlet. The first part of the pamphlet dealt with actual practices in the selection of seed corn. The second part was designed to determine how well the farmer understood each drawing in the pamphlet (1) without explanation and (2) after explanation. Fifty pamphlets were sent to each of 20 agricultural agents in Venezuela with instructions to give them to 50 small farmers who had already sown seed or were about to do so. An additional 600 pamphlets and questionnaires were also distributed. The agents were asked to administer the questionnaire.

Results: Of 1,021 farmers, 80 per cent selected their own seed before planting, using no systematic method of selection. For instance, very few farmers used markers to indicate the best corn in the field and only 7 per cent of the farmers harvested corn for seed. Almost none used DDT. Of the farmers, 42 per cent understood the drawings without explanation; 90 per cent understood them after explanation; and 7 per cent never understood them, even after explanation. The percentage of farmers who understood the pamphlet varied greatly from zone to zone within the country.

Public Opinion on Radio and Television, 1963.

Office of Educational Radio and Television, and Sociological Information Service, Ministry of Education, Province of Buenos Aires, Argentina. Luis Vesco, chief investigator.

Purpose: After the authorization of educational radio in the Province of Buenos Aires, it became apparent that a comprehensive audience analysis would be necessary before programs could be developed. The object of this study was thus to discover the nature of the potential radio audience within the five areas of the Province where reception was possible. An additional objective was to discover existing listening habits, and to some extent, TV viewing habits.

Procedures: The researchers identified the varying socio-economic residential zones within each of the five areas where radio broadcasts could be received. They selected blocks at random from each zone and interviewed four families within each block--a total of 1,451 families representing 5,858 persons.

Results: A comprehensive collection of data revealed (1) the size of each family interviewed; (2) the sex, age, and occupations of the family members; (3) hours of radio listening and its relation to family size; (4) relation of program to educational level of the father, mother, sons, and daughters; (5) daily listening hours, as well as preferred listening hours, of father, mother, sons, and daughters; (6) reservations about listening to new programs; (7) number of families who owned TV sets and (8) the number of hours TV sets were used daily. This information permitted the educational radio planners to create programs designed for specific audiences at specific times with an optimum degree of assurance that the programs would be heard.

UNESCO Rural Communication Experiment (Costa Rica), in progress.

Inter-American Popular Information Program (F. B. Waisanen and William R. Lassey); Central-American University Institute of Socio-Economic Research (Oscar Chavez Esquivel); and UNESCO Social Science Division (J.D.N. Versluys).

Purpose: To examine the process of diffusion of information about 20 new practices in agriculture, education, and health as introduced by several communication techniques; to test the efficacy of these techniques; and to test previous diffusion models in an experimental setting.

Procedures: The project directors employed objective and judgmental methods to select six "traditional" and six "progressive" communities. In each group, two communities serve as controls; two are being exposed to radio forum programs designed to persuade listeners to adopt selected practices; and two are being exposed to a campaign of printed and illustrated materials designed to increase understanding of these practices and to encourage increased literacy.

Persons living in the experimental communities are conducting weekly programs, working under the supervision of the project directors and using the methods noted. The project staff interviewed the heads of all families in the experimental communities before the information programs began, and will conduct a second and third series of interviews at periods of one and two years after they end.

Results: First reports were expected by July 1, 1964.

Use of the Random Sample Survey in Planning a Rural Communication Program, 1959.

Escritório Técnico de Agricultura Brasil - Estados Unidos. Chief investigators, Lloyd Clyburn, Builherme M. Kós, *et al*.

Purpose: To develop a checklist and questionnaire for obtaining information about the knowledge and skills of the rural population of Brazil.

Procedures: The project staff listed the types of information sought and formulated the questions necessary to elicit this information. They tested the preliminary questionnaires on sample populations and made the necessary revisions. The final questionnaire was designed to collect information in these areas: level of literacy, availability of information, mail received, use of radio, relationship of the household to the local socio-economic center, and movement of information leading to technical change. Methods were devised for the random selection of homes and interviewers were briefed for several hours on survey techniques and on the communication concept.

Results: From the samples taken, it was found that the following information could be obtained at reasonable cost: level of literacy; method of mail distribution; nature of reading materials received; distribution of radio receivers; preferred radio station programs; and mode, frequency, and range of travel. Fifty responses, if they represent all ethnic groups, appear to be an adequate sample for the survey of a county. The sample survey was found to be an effective instrument for the teaching of communication methods.

A Study of Professional Communicators: The Impact of Communications Training on Subsequent Professional Behavior, in progress.

Inter-American Popular Information Program (F. B. Waisanen, H. Calvert Anderson, and William R. Lassey); Inter-American Institute of Agricultural Sciences (staff members of the Scientific Information Service and the Department of Extension and Economics).

Purpose: To evaluate the effectiveness of the communications training programs of the above organizations on the professional behavior and productivity of graduates.

Procedures: A census was taken of all professionals involved in communication activities throughout Latin America in the fields of health, education, and agriculture. A schedule of questions was developed to be administered to samples of trainees and non-trainees in comparable positions. The two sample groups are being compared according to selected criteria of performance for professional communicators, including the use of audio-visual teaching materials and devices. Comparisons are being made also of personal communication behavior not necessarily related to professional performance, the use of mass media, use of professional communications journals, and speed of advancement in positions of responsibility.

Results: First reports were expected by August 1, 1964.

Adoption of New Foods and Drugs in Colena: A Preliminary Study, November, 1962.

The Nutrition Institute of Central America and Panama and the Inter-American Popular Information Program. Paul J. Deutschmann and Alfredo Mendez D., chief investigators.

Purpose: (1) To develop a communication model that will help to identify channel orientation of individuals. (For the purpose of the study, information channels were identified as: egocentric channel--obtaining information on a "see for myself" basis; internal community channel--obtaining information on the basis of "a member of my group said"; external to community channel--information on the hearsay of some person other than a member of the individual's group; impersonal channel--obtaining information from impersonal sources, usually mass communications.) (2) To see what the tendency to innovate is among various types of individuals, that is, the tendency to be receptive to change, to be alert to information about innovations, and to accept new ways of doing things. (3) To determine whether individuals who have a tendency to use channels which are removed from the self have a greater inclination to innovate. (4) To identify the tendency to innovate through inquiry about certain products.

Prodecures: The research team interviewed housewives in a Guatemalan town concerning their acceptance of five well-known food and drug products, and established two indices: (1) degree of adoption of product--"self only," "self and family," "other family members only," or none of these; and (2) time of adoption--the number of months or years since the subject first accepted the product. A second set of indices was established to determine how the subjects got further information about the product after first learning about it. It was noted whether the subjects were literate or illiterate. A final index was devised to show whether other persons--relatives or non-relatives--were involved in learning about the products initially.

Results: Early adopters of products made fairly substantial use of impersonal means of communication and little use of the egocentric channel. Literates, especially, tended to use the impersonal channel, and those who had been exposed to the communication media made little use of, and were minimally motivated by, the egocentric channel. All channels appeared to provide supplemental information after the incident of first knowledge but more literates than illiterates reported that they had added to their initial information. Mothers were the single most important source of information.

Preliminary Report: Comprehension and Meaning in Visual Communication Among Illiterate, Low Literate, and Higher Literate Individuals, February, 1964.

Inter-American Popular Information Program and the Scientific Information Service of the Institute of Inter-

American Social Sciences (Organization of American States). Luis Fonseca and William R. Lassey, chief investigators.

Purpose: To analyze the differences between literates and illiterates in the ability to interpret various kinds of pictorial symbols, to see how factors such as sequence of pictures, unrealistic size of object, photograph versus line drawing, and the use of graphs affect the way an individual looks at a pictorial page; and to determine what bearing, if any, education, occupation, media exposure, mobility, economic status, age, and sex have on pictorial interpretation.

Procedures: The researchers used two forms of a pictorial questionnaire; one was administered by interview and the other self-administered. In each case the subjects were requested to make interpretations, identifications, and selections that would indicate: (1) the weight of value versus position (whether the viewer chose an object centered on the page rather than one occupying greater area); (2) choice of high value subject (whether the viewer found one object on the page more or less important than another); (3) value of connecting devices (whether the viewer found devices to direct the eye--from top to bottom with numbers or from left to right with arrows--more helpful than no connecting devices); (4) the viewer's reaction to disproportional size (use of insects and animals); and (5) viewer's skill in interpretation of data in bar graph and line graph form.

Results: Literates did not appear to be affected by value attached to objects, but tended to select the upper objects on a page; illiterates were more random in their selection, but showed a tendency to choose the right side of the page. Illiterates with higher exposure to mass media scored higher on sequence identification than illiterates with lower exposure, but connecting devices did not appear to significantly improve interpretation for either group. Mobility (amount of travel), economic level, and occupation seemed to contribute substantially to skill in pictorial interpretation, but neither age nor sex appeared to be critical. A strong relationship between education and ability to interpret graphs was evident.

Preliminary Report: Perceptions of "Hot" and "Cold," January, 1963.

Nutrition Institute of Central America and Panama and the Inter-American Popular Information Program. Paul J. Deutschmann and Alfredo Mendez D., chief investigators.

Purpose: To probe the area of dietary beliefs and to report on perceptions of "hot" and "cold" as applied to foods and persons and the possible implications of these beliefs and perceptions for child-feeding practices. To determine the degree of consensus within and between communities concerning designations of "hot" and "cold" and concerning the nature of the beliefs, particularly the magical aspects of "hot" and "cold" noted by anthropologists in different Latin-American countries.

Procedures: Two villages were selected for the study--Choleña, a Ladino community; and Chinautla, an Indian community. Literates and illiterates were classified in both villages. Housewives were questioned to determine the following: (1) the "hotness" and "coldness" of seven foods, and foods which are especially "hot" or "cold"; and (2) situations in which a child is "hot" or "cold" and the consequences of giving "hot" or "cold" foods to a "hot" or "cold" child.

Results: The general concept of "hot-cold" was meaningful to most respondents but there was mixed response reflecting the notion of magic in connection with "hot" and "cold." The "hot-cold" concept had more meaning for literates than for illiterates, and more for Ladinos than for Indians. There was little consensus between communities on hot or cold qualities of food, although slight community patterns were noted. Responses to questions on food showed traces of belief in the magical attributes of hot or cold viands; questions about conditions of children, on the other hand, elicited rational descriptions of illnesses, symptoms, or natural conditions reflecting differences in body temperatures. The researchers concluded that further analysis of data would be needed to understand more clearly their implications for dietary practices.

A Study of the Use of the Mass Media and Knowledge of Current Affairs as Related to Socio-Economic Status in San José, Costa Rica, August, 1962.

Inter-American Popular Information Program. John T. McNelly and Augusto A. Torres, chief investigators.

Purpose: To determine whether persons of higher socio-economic status are heavier users of the mass media than persons of lower status; to see whether persons of the higher status demonstrate a particular preference for print media; and to see whether socio-economic status is related to knowledge of topics in the news.

Procedures: A sample of 150 households was selected from three wards in San José, Costa Rica. Each ward represented high, medium, and low socio-economic status. The heads of households were questioned about their use of newspapers, magazines, books, radio, and television. An index of knowledge of news topics was constructed by summing up scores on six topics: the Alliance for Progress, the UN, Peronistas, astronaut, audiovisual communication (which had been in the news because of a seminar running for several months), and the Cooperativa Dos Piños (a local dairy firm).

Results: Persons of higher socio-economic status are heavier users of mass media than persons of lower status and rank newspapers highest as a source of news. Radio is far more important than television among the lower socio-economic group--as could be expected since television is relatively new in Costa Rica and quite expensive. The use of television among the higher economic groups, however, fell below expectations. The reading of books and magazines was found to be far greater among the upper group, and this group also had far greater knowledge of news topics.

Comprehension of Pictorial Symbols; an Experiment in Rural Brazil, April, 1960.

Department of Agricultural Journalism, University of Wisconsin. Luiz Fonseca and Bryant Kearl, chief investigators.

Purpose: To see whether comprehension of pictorial symbols is affected by (1) familiar elements in the illustration, or unfamiliar ones; (2) compression of a process into one or two pictures or presentation in a sequential series of pictures; (3) presentation of unrealistic characteristics (such as in the depiction of humanized animals); and (4) age, formal education, socio-economic status, and level of culture in the observer's native region. Secondly, to determine whether individuals of limited education will interpret symbols literally or figuratively.

Procedures: The researchers sent questionnaires from the University of Wisconsin to the state of Minas Gerais, Brazil, where the director of ACAR, a rural agricultural bureau, distributed them to 4-S clubs (the Brazilian counterpart of the American 4-H club). Two forms of the questionnaire were used; in each it was possible to arrange replication of the test. The questionnaire presented a series of illustrations and symbols related primarily to farm and rural living. The respondents were requested to write what each picture or series of pictures meant. Several answers to each question were possible. A total of 580 questionnaires were returned to the University of Wisconsin for tabulation.

Results: (1) Unfamiliar objects tend to reduce the likelihood of correct interpretation, while familiar elements are an aid. (2) A process involving separate steps is comprehended more easily if there are at least as many individual pictures or frames as there are steps in the depicted process. (3) Individuals of limited education tend to give the most literal interpretation to pictorial symbols. (4) Except for symbols related to daily life, illiterates do a significantly poorer job of interpretation than do literates. (5) Formal education sharply increases the ability to interpret pictorial symbols which have a figurative meaning, demand a greater capacity of abstraction, are to be interpreted as a series telling a story, or are beyond the scope of the viewer's daily life. Although age has some bearing on the ability to comprehend pictorial symbols, it is a less important factor than formal education.

EDUCATIONAL MEDIA IN LATIN AMERICA: THE LITERATURE

The audiovisual media field in Latin America, as this report has tried to emphasize, is still in the preliminary stage of planning for action programs. At this point it is preoccupied with practical problems of production, distribution, utilization, and inservice training. Consequently, just as it has not yet undertaken any significant amount of research, neither has it produced a sizable volume of literature.

A large portion of the literature that is available has come out of conferences held in the past five years and reflects the dominant role of public information programs in the Latin American media field. In terms of successful communication techniques, the interests of formal education and informal public education, anywhere, will overlap. But in developing areas such as Latin America, where radio and TV have come to the fore in efforts of mass education in health, agriculture, and literacy, the general communications literature will have more than peripheral interest for those engaged in institutionalized education.

As far as this survey could determine, there appears to be only one major report of a Latin-American conference directed, even partially, to in-school education. This is the report of the UNESCO-sponsored Regional Seminar on the Use of Visual Aids in Adult and School Education in Latin America. The seminar, held in Mexico City in 1959, provided an opportunity for exchange of information on the production, distribution, utilization, and evaluation of audiovisual aids. It concerned itself also with the organization of national audiovisual services, international cooperation in audiovisual education, and the role of the Latin-American Educational Film Institute located in Mexico City.

The Final Report, released from UNESCO Headquarters in Paris in 1960, states recommendations concerning the above areas and presents the proceedings, working papers, and discussions of the seminar. (UNESCO sponsored the Mexican seminar as a follow-up to similar seminars held in Messina, Italy, in 1953, and New Delhi, India, in 1958.)

A second seminar, also in Mexico City, will result in a publication from the UNESCO Mass Communication Techniques Division. The seminar, held at the Latin-American Educational Film Institute in June and July 1964, was conducted on the topic of educational television. Representatives of 17 Latin-American countries were thus provided with an opportunity to exchange information in informal discussions and to hear formal lectures.

UNESCO has been the prime mover also in bringing together data on the current world status of communications media. World Communications--Press, Radio, Television, Film, published by UNESCO in 1964, summarizes the general level of communication development around the world. A 22-page section is given to communications facilities in Latin America, country by country. This is probably the most comprehensive listing of data concerning the current status of press, radio, television and film in Latin America--as well as in other parts of the world.

A UNESCO release in 1959, Professional Associations in the Mass Media, makes available specific information about press, film, radio, and television organizations. An analysis of the role of professional organizations in society is followed by a listing of international associations, and national associations by continent and by country. Each organization is listed with its address, scope, purpose, number of members, qualifications for membership, dues, and names of the secretariat. Nine pages are devoted to Latin-American nations.

UNESCO in February 1961 sponsored a major meeting confined to the development of information media in Latin America. The reports at this meeting, held in Santiago, Chile, covered news agencies, newspapers, periodicals, radio broadcasting, television, film, training of media specialists, documentation of information, and scientific research in the mass media. The report of the conference is available only in Spanish as Part I of a two-part publication: *Los Medios de Información en América Latina: Factor de Desarrollo Economico y Social*. Part II is available in English as Paper No. 33, *Mass Media in the Developing Countries*. It is one of a series entitled "Reports and Papers on Mass Communications," and is world-wide in scope.

The Inter-American Popular Information Program (San José, Costa Rica) has made a concerted effort to identify centers of communication research throughout Latin America, and the personnel engaged in such research. The resulting publication is *A Study of the Human and Institutional Resources in the Social Sciences and Communications Research in Selected Countries in Latin America*. Dr. Antonio Arce, representing the Program, met with nearly 100 individuals during a three-month period in 1961 to gather the information reported. This 45-page study is not only a directory of persons and institutions; it is also an extensive report of the objectives and programs of each agency at the time the inquiries were made.

In 1962 the Inter-American Popular Information Program published a 145-page bibliographical work entitled, Three Preliminary Bibliographies of Works Related to the Social Sciences in Latin America. The Program collaborated with the College of Communication Arts at Michigan State University to compile this listing of reports, articles, and books relevant to the social sciences in Latin America. References are listed under three section headings: "Research About Latin America by North Americans," "Research About Latin America by Latin Americans," and "Research Published by Various Institutions in Latin America."

The regional office of the Inter-American Popular Information Program in Montevideo, Uruguay, is the publisher of the Spanish-language directory, Directorio de Servicios de Información. Released in 1963, it lists all personnel and job titles for the information services of various agencies in Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, and Uruguay. The scope and functions of each information service are noted, as well as the relationship of each to the larger organization it serves. Specific quantitative data on the amount of equipment, numbers of publications produced, and magnitude of production activities are also cited.

The Communications Resources Division of the U.S.

Agency for International Development in Washington, D.C., is the publisher of a bi-monthly periodical called The Multiplier in International Development. For the past ten years this journal has been devoted to reporting practical ideas and programs in the educational media field. Almost every issue carries a report on activities in Latin America. The January-February 1963 issue (Vol. IV, No. 7) reports, for instance, on the Costa Rica communications media conference in an article entitled "The Communicator and the Alliance." The same issue also reports on a home economics school in Colombia.

Selected References on General Education in Latin America

Information on Latin American education, in the broad sense, is also severely limited. The following references are available in English and will give the reader background information for this and other studies of the Latin-American audiovisual movement.

1. American Association of Colleges for Teacher Education, National Education Association, Education for National Development--Focus: Latin America. Sixth Annual AACTE Conference on International Understanding, April 16-17, 1964. Washington, D.C., the Association, 1964. 72 pages.

(This conference was sponsored by the AACTE and the School of Education, University of Pittsburgh. The resulting papers reflect two basic assumptions: (1) human resources are the most vital and fundamental element in national development; and (2) the development of human resources can be brought about only through education.)

2. Hauch, Charles C., *The Current Situation in Latin American Education*. Washington, D.C.: U.S. Government Printing Office, 1963. (OE-14080) 30 pages. (This monograph presents information based on data available to the U.S. Office of Education, much of it in unpublished form. Educators embarking on Latin American assignments should find the information presented extremely useful. Students of education seeking to inform themselves on the problems facing other countries in this hemisphere will also find it of value.

3. *Phi Delta Kappan*, "Problems and Promises of Education in Latin America." January 1964, Vol. XLV, No. 4, entire issue. Bloomington, Indiana: Phi Delta Kappa. (Sixteen articles by North and South American authors cover many aspects of Latin-American education. Topics treated include school organization, research, U.S. assistance programs, philosophy, teacher education, special education, and secondary and higher education.)